

**What Is Claimed Is:**

1        1. An apparatus for supporting one or more servers on a single  
2    semiconductor chip, comprising:  
3            a plurality of first-level translation lookaside buffers on the single  
4    semiconductor chip, wherein each first-level translation lookaside buffer is  
5    associated with a processor core of a plurality of processor cores on the single  
6    semiconductor chip; and  
7            a second-level translation lookaside buffer that is coupled to the plurality  
8    of first-level translation lookaside buffers;  
9            wherein an access to a page table entry in main memory by a processor  
10   core associated with a first-level translation lookaside buffer can be stored in the  
11   second-level translation lookaside buffer before being forwarded to the first-level  
12   translation buffer associated with the processor that requested the page table entry;  
13            whereby storing the page table entry in the second-level translation  
14   lookaside buffer eliminates a need to refer to main memory to access the same  
15   page table entry if another processor requests the same page table entry.